

ABSTRACT

A rugged terrain robot (RTR) apparatus can function as a reconnaissance robot to optimize safety of search or rescue personnel. Remote control places the RTR in either a rolling mode or in a stair-climbing mode. Remote feedback is provided by an on-board RTR camera and microphone. The RTR consists of two clamshell sections and a tail boom section. The RTR uses polymorphic locomotion of the clamshells for efficient maneuverability in traversing rugged terrain when in a "rolling" mode and is switched remotely into a stair-climbing mode (or extreme terrain) using end-over-end clamshell motion with a tail boom assist to climb stairways. The RTR can carry various communication devices, sensors and payloads for use by police, firemen, soldiers, rescue or other applications to optimize safety when direct entry by a human may not be desirable until an area is reconnoitered. The RTR is remote controllable and easily transported to a reconnaissance area.